Rec. @ hearing
5/14/14
from D. Anne Atherton

Town of Nantucket/SBPF – 85 - 107A Baxter Road
SE48-2610 (geotube structure)

PUBLIC COMMENT

I. As a point of clarification, this project is not a pilot project.

The proposal for the 900-foot geotube sea wall that is the subject of the Notice of Intent (NOI) before you is not a pilot project, but the first phase of a 4000-foot, or longer, hard-armoring structure that according to the co-applicant who is publicly promoting it, will run from the lighthouse south to mid-Baxter Road. [See attached Exhibit A, Communication Addressed to "Dear Nantucketer," Signed by SBPF Principals, Josh Posner and Helmut Weymar, Dated February 4, 2013. Emphasis added.]

It has not been installed, nor is permitting being sought, to monitor the geotextile structure and assess its impacts. While ConCom submissions are generally discrete and stand alone, in this instance, the co-applicant is already linking this coastal engineering structure (CES) to a much longer sea wall.

Therefore, unlike prior proposals, the Commission should not consider this to be "test" of a relatively small hard-armoring structure from which we can obtain data that will be beneficial in the longer term. Previously, this co-

applicant has proposal hard-armoring (gabions) on a "pilot" basis, but this is not the case with the geotextile tubes. In this instance, the Commission and the public is already on notice that, if this installation is permitted, more hard-armoring surely is to come.

II. The Town has adopted an Emergency Plan, should a real emergency occur in the area of northern Baxter Road.

While the 900-foot geotube sea wall is being represented as an "emergency" measure, the fact is that the Town already has an Emergency Plan in place, recommended by Town staff and adopted by the Board of Selectmen. [See Exhibit II, Memorandum to the Town Manager from the Emergency Management Coordinator and the DPW Head, "The Emergency Monitoring of Baxter Road," dated November 19, 2013.]

Given the environmental damage demonstrated during the construction of the geotextile hard-armoring structure, it is evident that implementing this Emergency Plan would have far less adverse impacts and should therefore be considered a preferable alternative to dealing with any emergency, should it arise.

III. In the words of one of the co-applicants, "Geotextile tubes are not well-suited to a high energy environment like Sconset." [See Exhibit III, Atherton Submission, Baxter Road and Sconset Bluff Storm Damage Project, Notice of Intent, Alternatives Analysis, Dated July 2, 2013, p. 6.]

This submission is in the record of the NOI cited above for a rock revetment, a matter currently before the Commission and continued. The paragraph is an "analysis" of why geotextile tubes will not work at this site. Such statements undermine any assertion that geotextile tubes are a preferable alternative – and, ironically, they are in the words of the co-applicant, SBPF, themselves.

IV. The Commission has already found, by formal vote of 4-to-3 taken on November 20, 2013 within the public hearing of this NOI that there are, in fact, reasonable alternatives to geotextile tubes.

While the minutes of the November 20 meeting of the Commission are not yet available, according to Peter B. Brace, environmental writer and reporter who has been attending the hearings and writings summaries of the proceedings for the Nantucket Coastal Conservancy,

> "Finally, [Commissioner] Glowacki made a motion that there was no reasonable alternative to the geotubes, which commissioner Andy Bennett seconded. But the vote didn't go their way with commissioners Bennett, Glowacki and Ian Golding voting yes and commissioners Leslie Johnson, Sarah Oktay (via cell phone while traveling by train), Jen Karberg and ConCom chairman Ernie Steinauer voting no."

IV. Adverse Impacts to the Public Beach

Expert written testimony has been submitted on the record by Dr. Robert Young, Director of the Program for the Study of Developed Shorelines, a joint venture of Duke and

Western Carolina Universities, in a letter dated November 5, 2013, that "When placed on an eroding or retreating beach or bluff, geotubes will cause that beach to narrow and eventually disappear."

There has been no subsequent submission from the applicants to mitigate this impact. Without mitigation and the assurance of some amount of "dry" beach in front of the sea wall, the ability of the public to recreate on their own beach is severely curtailed, if not obstructed. Going up and over a 20-plus-foot geotube sea wall supposedly covered with excavated sediment should not be an acceptable alternative.

D. Anne R. Atherton

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ATTACHMENT I: Communication Addressed to "Dear Nantucketer," Signed by SBPF Principals, Josh Posner and Helmut Weymar, Dated February 4, 2013.

ATTACHMENT II: Memorandum to the Town Manager from the Emergency Management Coordinator and the DPW Head, "The Emergency Monitoring of Baxter Road," dated November 19, 2013

February 4, 2014

Dear Nantucketer—

January is not generally a time when much gets done on Nantucket but this one could not have been more different. As most of you know from following the Inquirer and Mirror, over the past 6 weeks an amazingly skilled and dedicated crew of construction workers successfully installed the 900 foot long emergency geotube project that was permitted in late December by the Nantucket Conservation Commission. Under the leadership of Jamie Feeley and his company, Cottage & Castle, the team worked through single digit cold, a significant Nor'easter and a separate blizzard and got the job done. Our emergency permit allowed us 30 days to complete the project, something no one thought possible. We received a State extension for only a few extra days to finish filling the tubes, and then took a couple of added weeks to complete the promised sand delivery. We are now finally down to the last couple of days work, then clean-up and re-grading some rutted road shoulders. Most people have been very impressed with the professionalism and quality of the construction effort, especially island tradesmen

who know what it takes to get something like this accomplished in the middle of winter.

At this point, as you can see from the attached photos, the tubes are buried under a neatly graded blanket of sand 3-5 feet deep, ready for whatever storms may come in the coming months.

Press coverage for the project has been high profile with stories on the front page of the I&M most weeks. You can also check out the website www.nantucketerosion.com created by Dirck and Sharon Van Lieu, independent photographers who have been chronicling the erosion of Sankaty Bluff for many years. Daily updates beginning just before Christmas show the entire construction process right up to the completion of the system. There is even a video taken by a drone that has gone viral on the internet showing some amazing views from mid-air. https://vimeo.com/84714541 Ignore the horror movie style soundtrack.

We have climbed a very tall mountain over the past 9 months to get our project this far and while we have every reason to feel a sense of

accomplishment, we can see from here that there are at least a few more mountains on the other side. We face another process with the Con Com for the long-term permitting of the emergency project, including the originally contemplated additional 6'-8' top tier of protection. There is no guarantee Con Com will approve that, or even that which has been installed. Sadly we won't be surprised if project opponents urge the removal of the newly installed project. Hopefully they will not prevail. We now need to get to work on gaining permission to expand the project to its full length from the lighthouse to the point to which erosion has reached, about the mid-point of Baxter Road.

We are impressed enough with the potential of the geotube technology that we are considering changing to this approach from the rock revetment proposal. There will be more to come on this as we explore the pros and cons more deeply. Regardless, we will once again need Con Com approval as well as a vote of Town Meeting for the full length project. Depending on how things shake out this could happen as early as the fall of 2014. A major issue we need to sort out before that will be how to establish a cost sharing system among the affected owners that can meet the costs of the project and its ongoing

maintenance. We expect to turn our attention to this over coming weeks and elicit broad community feedback and discussion in the spring and summer.

In order to be in a position to win at Town Meeting (possibly next fall) we need to build a broader understanding of what we are doing among Nantucketers. We will focus more attention on communications, community outreach and education in the coming months. To that end I am attaching a letter to the editor that ran in this week's I&M once again making our case. We need each of you to help explain our project to others, how it works, and how it avoids harmful impacts to others by annually supplying sacrificial sand in the amount that would have eroded from the bluff if the project were not there. We hope to have a comprehensive game plan and some specific requests for your help in the near future.

So as you see there is still a lot to do. But for the moment at least we can feel good about the protection for Baxter Road that has been accomplished. There is now no reason why Baxter should have to be closed. We are still required by our partnership agreement with the Town to

identify and gain commitments for an acceptable alternative access route so that if the project fails and the road is breached, a “pre-approved” route is in place. This alternative route would only exist as a back-up plan and,we believe, it will not be needed for decades, perhaps centuries.

Thank you again for your continued interest and support as we work our way through this very long obstacle course. It is a lot of work but Sconset is worth it.

Josh Posner and Helmut Weymar

Emergency Management & Marine Safety

Town of Nantucket
4 Fairgrounds Road
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dfronzuto@nantucket-ma.gov

D. F. Fronzuto
Coordinator
508-325-4100 X 7007
508-228-7246 FAX

From: Emergency Management Coordinator, DPW Director

To: Town Manager

Date: November 19, 2013

RE: Emergency Monitoring of Baxter Road

The intent of this plan is to protect the health and safety of the public, including residents travelling on Baxter Road, north of Bayberry Lane.

1. Monitor developing weather prior to any winter storm.
2. If extended periods of wind in excess of 50 MPH and rain/snow are forecast, erect barricades to block traffic in the north bound lane of Baxter Road
3. Monitor distance from stakes installed by SBPF representative. Stakes to be placed 25' from the eastern edge of the bluff.
4. It is recommended that when the distance from the edge of the road to the edge of the bluff is less than 25' the road be closed to everyone except residents
5. Some widening of the road may be necessary on the west edge of the road within the road layout if additional width is needed to maintain the 25' separation.
6. Milone & MacBroom continue to recommend development of an alternative access plan for Baxter Road.
7. Install orange construction fencing with appropriate signs reading "Danger" "Stay Back from Bluff Edge"
8. Visual observations of distances and conditions will be made prior to during and post storm events

Notification (Town Council to prepare) should be made to property owners north of Bayberry Lane that the closure of Baxter Road may occur prior to and during storm events and that additional failure of the slope may cause there to be a permanent closure.

Rec. @ meeting
by D. Anne Atherton

Notice of Intent

(M.G.L. c. 131, §40) and Town of Nantucket Wetlands Bylaw Chapter 136

BAXTER ROAD AND SCONSET BLUFF STORM DAMAGE PREVENTION PROJECT

Submitted to:
Nantucket Conservation Commission
2 Bathing Beach Road
Nantucket, Massachusetts 02554

Submitted by:
Siasconset Beach Preservation Fund
c/o Jenny Garneau
18 Sasapana Road
Nantucket, Massachusetts 02554

Prepared by:
Epsilon Associates, Inc.
3 Clock Tower Place, Suite 250
Maynard, Massachusetts 01754

In Association with:
Ocean and Coastal Consultants, Inc.
475 School Street, Unit 9
Marshfield, MA 02050

July 2, 2013

2.0 Alternatives for Road and Bluff Protection

This section provides a summary description of ten alternatives for preventing erosion of the coastal bank at Sconset.

2.1 Geotextile Tubes

Geotextile tubes (geotubes) are fabricated from high strength, woven polyester or polypropylene sewn together into a tube shape and filled with sand. A conceptual geotube design for a 50-year storm would consist of at least four 30-foot-circumference geotextile tubes installed in a terraced alignment and covered with clean sand fill. Construction would require excavating the existing profile to +4.5 feet MLW and installing a 3-foot-circumference anchor tube and scour apron. Geotubes would then be installed and filled on the excavated terraces to approximately 5 feet tall and 11 feet wide. After the geotubes were filled, a clean sand fill would be placed to a top elevation of approximately +23.5 feet MLW. The sand fill would be placed on a 1 vertical: 2.5 horizontal slope to meet existing grade while maintaining a continuous one foot thick sand cover over the filled tubes.

Geotextile tubes are not well-suited to a high energy environment like Sconset. Too much scour at the toe could potentially lead to structural failure (even when a scour apron is included in the design). Geotubes are susceptible to damage from vandalism, debris, and storm waves; storm-driven debris may puncture and tear the tube. For this reason, maintenance costs for geotubes tend to be higher than for other alternatives. When ripped open by storm waves, geotextile tubes may fail in place, emptying sand onto the beach and possibly releasing geotextile material to the coastal environment. The release of sacrificial sand would not have any adverse environmental effects since clean, beach-compatible sand would be used to fill the tubes. However, replacement of the geotube would be expected to be required on a frequent basis (one or more times annually). Such replacement often cannot be accomplished between successive storms, potentially leaving the bank vulnerable to wave-induced scarping at the toe (and subsequent slumping of the upper bank, which undermines vegetative stabilization that otherwise works) at the time when protection is most needed. For these reasons, geotubes are not considered a viable long-term erosion control solution.

2.2 Beach Nourishment

Beach nourishment would involve the placement of approximately 2.6 million cubic yards of sand on Sconset Beach. The nourished beach would be approximately 200 feet wide with a berm height of 12-16 feet above MLW. Sand would be obtained from an offshore borrow site; a likely candidate would be the offshore shoal system known as Bass Rip, though other potential sites could also be evaluated. The wider beach would absorb and dissipate wave energy, thereby increasing protection to infrastructure and property threatened by erosion and storm damage. Additionally, the wider beach would potentially

ATTACHMENT III: Atherton Submission, Baxter Road and Sconset Bluff Storm Damage Project, Notice of Intent, Alternatives Analysis, Dated July 2, 2013, p. 6.

ATTACHMENT IV: [Peter B. Brace, Summary November 20, 2013 Public Hearing]

ATTACHMENT V: Letter from Dr. Robert Young to Nantucket Conservation Commission, Dated November 5, 2013.